

Eye Diseases and Disorders of Vision - Diabetic Retinopathy

Summary of Methods and Data for Estimate of Costs of Illness

- | | |
|---|-----------------|
| 1. Estimated Total Economic Cost | \$ 2.8 billion |
| Estimated Direct Cost | \$ 0.6 billion |
| Estimated Indirect Cost | \$ 2.2 billion |
| Reference Year | 1992 |
| IC Providing the Estimate | NEI |
| | |
| Direct Costs Include: Other related nonhealth costs | Yes |
| Indirect Costs Include: | |
| Mortality costs | Not available |
| Morbidity costs: Lost workdays of the patient | Yes |
| Morbidity costs: Reduced productivity of the patient | Yes |
| Lost earnings of unpaid care givers | Not available |
| Other related nonhealth costs | Not available |
| Interest Rate Used to Discount Out-Year Costs | 6 % |
| 2. Category code(s) from the International Classification of Diseases, 9th Revision, Clinical Modification, (ICD-9-CM) for all diseases whose costs are included in this estimate: <u>362.0</u> . | |
| 3. Estimate Includes Costs: | |
| Of related conditions beyond primary, strictly coded ICD-9-CM category | Not available |
| Attributable to the subject disease as a secondary diagnosis | Not available |
| Of conditions for which the subject disease is an underlying cause | Not available |
| 4. Population Base for Cost Estimate (Total U.S. pop or other) | Total U.S. pop. |
| 5. Annual (prevalence model) or Lifetime (incidence model) Cost: | Lifetime |
| 6. Perspective of Cost Estimate (Total society, Federal budget, or Other) | Total Society |
| 7. Approach to Estimation of Indirect Costs | Human Capital |
| | |
| 8. <u>Source of Cost Estimate</u> : (Reference published or unpublished report, or address and telephone of person/office responsible for estimate) | |

Drummond, M.F., et al. Assessing the Costs and Benefits of Medical Research: The Diabetic Retinopathy Study, 1992. *Soci Sci Med*, 34(9):973-981.

9. Other Indicators of Burden of Disease:

Diabetic retinopathy accounts for approximately 12 percent of new cases of blindness each year among persons aged 20-74 years in the United States. Diabetes increases the risk of blindness 25-fold over that of the general population, and it is estimated that 24,000 Americans become blind each year as a result of diabetic retinopathy.

10. Commentary:

Analysis of costs associated with blindness due to diabetic retinopathy was first reported in Drummond, Davis and Ferris study (1992). Recently the assumptions used in that study were reviewed and updated to reflect current information on treatment effectiveness of diabetic

retinopathy. This information emphasized the significant impact of clinical trials on reducing societal costs of blindness from diabetes. NEI clinical research on diabetic retinopathy has cost the American taxpayer \$181 million in 1992 prices, but yields an annual societal savings of \$1.2 billion to \$1.6 billion. The NEI's Diabetic Retinopathy Study (DRS) and the Early Treatment of Diabetic Retinopathy Study (ETDRS) demonstrated that laser photocoagulation treatment could prevent blindness in 95% of diabetic retinopathy patients. Only an estimated 50 percent of high-risk proliferative diabetic retinopathy patients are receiving treatment, and 50% of those untreated will experience blindness within 5 years. The cost of blindness includes Social Security benefits, lost productivity, and Medicare expenditures.